AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1   1. (Original) A computer-implemented method for combining at least

2   two overlapping layers to render an image, the image containing a plurality of

3   image pixels, each overlapping layer containing a plurality of layer pixels, each

4   layer pixel corresponding to one of the image pixels, the method comprising:

5   a') defining a tile, the tile comprising a subset of the image pix-

6   els delimited according to an area of overlap among a set of

7   at least two layers, so that a first portion of the image lies

8   within the tile and a second portion of the image lies outside

9   the tile; and

10   a) processing the first portion of the image distinctly from the

11   second portion of the image by, for at least one image pixel

12   in the defined tile:

13   a.1)   initializing an accumulator color value;

14   a.2)   selecting one of the layers in the set of at least two

15   layers, the selected layer having a layer pixel corre-

16   sponding to the image pixel, the layer pixel having a

17   color value;

18   a.3)   compositing the color value of the layer pixel with the

19   accumulator color value;

20   a.4)   storing the result of a.3) in the accumulator;

21   a.5)   determining whether layer pixels for any remaining

22   layers in the set of at least two layers should be proc-

23   essed;

24   a.6)   responsive to a.5) indicating that layer pixels for any

25   remaining layers should be processed, repeating a.2)

26   to a.6); and

27   a.7)   outputting the accumulator color value.

1   2. (Original) The method of claim 1, wherein each layer pixel has an

2   opacity value, and wherein:

3   a.1) further comprises initializing an accumulator opacity value;

4   a.3) further comprises compositing the opacity value of the layer

5   pixel with the accumulator opacity value; and

6   a.5) comprises determining whether the accumulator opacity value

7   indicates full opacity.

1   3. (Original) The method of claim 1, wherein a.2) comprises selecting a

2   topmost remaining layer in the set of at least two layers.

1 4. (Original) The method of claim 1, wherein a.7) comprises outputting

2 the accumulator value to a frame buffer.

1 5. (Original) The method of claim 1, further comprising:

2   b)   displaying the image.

1 6. (Original) The method of claim 1, further comprising:

2   b)   repeating a) for each image pixel in the defined tile.

1 7. (Original) The method of claim 1, wherein a) comprises performing

2 a.1) through a.7) for at least two image pixels concurrently.

1 8. (Original) The method of claim 1, further comprising:

2   b)   concurrently with a), for a second image pixel in the defined

3   tile:

4   b.1)   initializing a second accumulator color value;

5   b.2)   selecting one of the layers in the set of at least two layers, the

6   selected layer having a second layer pixel corresponding to

7   the second image pixel, the second layer pixel having a color

8   value;

9   b.3)   compositing the color value of the second layer pixel with

10   the second accumulator color value;

11   b.4) storing the result of b.3) in the second accumulator;

12   b.5) determining whether layer pixels for any remaining layers in

13   the set of at least two layers should be processed;

14   b.6) responsive to b.5) indicating that layer pixels for any remain-

15   ing layers should be processed, repeating b.2) to b.6); and

16   b.7) outputting the second accumulator color value.

1   9. (Original) The method of claim 1, wherein at least one of the layers in

2 the set of at least two layers is non-rectangular.

1   10. (Original) The method of claim 1, wherein at least one pixel of at least

2 one of the layers in the set of at least two layers is transparent, and wherein a.3)

3 comprises:

4   a.3.1) responsive to the layer pixel being transparent, retaining the

5   accumulator color value; and

6   a.3.2) responsive to the layer pixel not being transparent, com-

7   positing the color value of the layer pixel with the accumu-

8   lator color value.

1   11. (Original) The method of claim 1, further comprising:

2   b') repeating a') and a) for at least one second defined tile.

1 12. (Original) The method of claim 1, wherein each layer comprises a

2 window, and wherein the image comprises a display for a windowing system.

1 13. (Original) The method of claim 1, wherein a first one of the layers in

2 the set overlaps a second one of the layers in the set, and wherein each layer

3 comprises bounds defined by edges, and wherein at least one edge of the first

4 layer lies within the bounds of the second layer, and wherein a') comprises:

5 subdividing the second layer along a line corresponding to an ex-

6 tension of the at least one edge of the first layer that lies

7 within the bounds of the second layer.

1 14. (Original) The method of claim 1, wherein:

2 a.2) comprises selecting one of the layers in the set of at least two

3 layers, the selected layer having a layer pixel corresponding

4 to the image pixel, the layer pixel having a color value and

5 an alpha value; and

6 a.3) comprises compositing the color value of the layer pixel with

7 the accumulator color value, using the alpha value.

1 15. (Original) A system for combining at least two overlapping layers to

2 render an image, the image containing a plurality of image pixels, each overlap-

3   ping layer containing a plurality of layer pixels, each layer pixel corresponding to

4   one of the image pixels, the system comprising:

5   a tile subdivider, for defining a tile, the tile comprising a subset of

6   the image pixels delimited according to an area of overlap

7   among a set of at least two layers, so that a first portion of

8   the image lies within the tile and a second portion of the im-

9   age lies outside the tile;

10   an accumulator, for initializing an accumulator color value for at

11   least one image pixel in the defined tile;

12   a layer selector, coupled to the tile subdivider, for successively se-

13   lecting each of at least a subset of the layers in the set of at

14   least two layers, each selected layer having a layer pixel cor-

15   responding to the image pixel, the layer pixel having a color

16   value;

17   a compositor coupled to the layer selector and to the accumulator,

18   for, for each successively selected layer, compositing the

19   color value of the layer pixel with the accumulator color

20   value and storing the result in the accumulator; and

21   an output device, coupled to the accumulator, for outputting the

22   accumulator color value;

23   wherein in combining the overlapping layers, the accumulator, the

24   layer selector, and the compositor process the first portion of

25   the image distinctly from the second portion of the image.

1   16. (Original) The system of claim 15, wherein each layer pixel has an

2   opacity value, and wherein:

3   the accumulator further initializes an accumulator opacity value;

4   the compositor further composites the opacity value of the layer

5   pixel with the accumulator opacity value and stores the re-

6   sult in the accumulator; and

7   the subset of overlapping layers selected by the layer selector is

8   determined responsive to a comparison of the accumulator

9   opacity value with a full opacity value.

1   17. (Original) The system of claim 15, wherein the layer selector succes-

2   sively selects layers by selecting a topmost remaining layer in the set of at least

3   two layers.

1   18. (Original) The system of claim 15, wherein the output device outputs

2   the accumulator value to a frame buffer.

1   19. (Original) The system of claim 15, further comprising a display de-

2   vice, coupled to the output device, for displaying the image.

1   20. (Original) The system of claim 15, wherein each of the layer selector,

2   compositor, accumulator, and output device operates on each image pixel in the

3   defined tile.

1   21. (Original) The system of claim 15, wherein the layer selector, com-

2   positor, accumulator, and output device each operate on at least two image pix-

3   els concurrently.

1   22. (Original) The system of claim 15, further comprising a second accu-

2   mulator, coupled to the compositor, wherein:

3   the second accumulator initializes a second accumulator color

4   value for a second image pixel in the defined tile;

5   the layer selector, concurrently with successively selecting each of

6   at least a subset of the layers in the set of at least two layers

7   having a layer pixel corresponding to the first image pixel,

8   selects one of the layers in the set of at least two layers hav-

9   ing a second layer pixel corresponding to the second image

10   pixel, the second layer pixel having a color value;

11   the compositor, concurrently with compositing the first color value

12   of the layer pixel with the accumulator color value, compos-

13   ites the color value of the second layer pixel with the second

14   accumulator color value and stores the result in the second

15   accumulator; and

16   the output device outputs the second accumulator color value.

1   23. (Original) The system of claim 15, wherein at least one of the layers in

2   the set of at least two layers is non-rectangular.

1   24. (Original) The system of claim 15, wherein at least one pixel of at least

2   one of the layers in the set of at least two layers is transparent, and wherein the

3   compositor:

4   responsive to the layer pixel being transparent, retains the accumu-

5   lator color value; and

6   responsive to the layer pixel not being transparent, composites the

7   color value of the layer pixel with the accumulator color

8   value.

1   25. (Original) The system of claim 15, wherein:

2   the tile subdivider defines as a second tile a second area of overlap

3   between a second set of at least two layers, the tile compris-

4   ing a second subset of the image pixels;

5   the accumulator initializes a second accumulator color value for at

6   least one image pixel in the second defined tile;

7   the layer selector successively selects each of at least a subset of the

8   layers in the second set of at least two layers, each selected

9   layer having a layer pixel corresponding to the image pixel,

10   the layer pixel having a color value;

11   the compositor, for each successively selected layer, composites the

12   color value of the layer pixel with the second accumulator

13   color value and stores the result in the accumulator; and

14   the output device outputs the second accumulator color value.

1   26. (Original) The system of claim 15, wherein each layer comprises a

2   window, and wherein the image comprises a display for a windowing system.

1   27. (Original) The system of claim 15, wherein a first one of the layers in

2   the set overlaps a second one of the layers in the set, and wherein each layer

3   comprises bounds defined by edges, and wherein at least one edge of the first

4   layer lies within the bounds of the second layer, and wherein the tile subdivider

5   subdivides the second layer along a line corresponding to an extension of the at

6   least one edge of the first layer that lies within the bounds of the second layer.

1   28. (Original) The system of claim 15, wherein:

2   the layer selector successively selects each of at least a subset of the

3   layers in the set of at least two layers, each selected layer

4   having a layer pixel corresponding to the image pixel, the

5   layer pixel having a color value and an alpha value; and

6   the compositor composites the color value of the layer pixel with

7   the accumulator color value, using the alpha value.

1   29. (Original) A computer program product comprising a computer-

2   usable medium having computer-readable code embodied therein for combining

3   at least two overlapping layers to render an image, the image containing a plu-

4   rality of image pixels, each overlapping layer containing a plurality of layer pix-

5   els, each layer pixel corresponding to one of the image pixels, the computer pro-

6   gram product comprising:

7   computer-readable program code devices configured to cause a

8   computer to define a tile, the tile comprising a subset of the

9   image pixels delimited according to an area of overlap

10   among a set of at least two layers, so that a first portion of

11   the image lies within the tile and a second portion of the im-

12   age lies outside the tile; and

13   computer-readable program code devices configured to cause a

14   computer to process the first portion of the image distinctly

15   from the second portion of the image by, for at least one im-

16   age pixel in the defined tile:

17   initializing an accumulator color value;

18   selecting one of the layers in the set of at least two layers, the se-

19   lected layer having a layer pixel corresponding to the image

20   pixel, the layer pixel having a color value;

21   compositing the color value of the layer pixel with the accumulator

22   color value;

23   storing the result of the compositing in the accumulator;

24   determining whether layer pixels for any remaining layers in the

25   set of at least two layers should be processed;

26   responsive to the determination indicating that layer pixels for any

27   remaining layers should be processed, repeating the initializ-

28   ing, selecting, compositing, storing, and determining steps;

29   and

30   outputting the accumulator color value.

1   30. (Original) The computer program product of claim 29, wherein each

2   layer pixel has an opacity value, and wherein:

3   the computer-readable program code devices configured to cause a

4   computer to initialize further comprise computer-readable

5   program code devices configured to cause a computer to ini-

6   tialize an accumulator opacity value;

7   the computer-readable program code devices configured to cause a

8   computer to composite further comprise computer-readable

9   program code devices configured to cause a computer to

10   composite the opacity value of the layer pixel with the ac-

11   cumulator opacity value; and

12   the computer-readable program code devices configured to cause a

13   computer to determine whether layer pixels for any remain-

14   ing layers should be processed comprise computer-readable

15   program code devices configured to cause a computer to de-

16   termine whether the accumulator opacity value indicates full

17   opacity.

1   31. (Original) The computer program product of claim 29, wherein the

2   computer-readable program code devices configured to cause a computer to se-

3   lect one of the layers comprise computer-readable program code devices config-

4   ured to cause a computer to select a topmost remaining layer in the set of at least

5   two layers.

1   32. (Original) The computer program product of claim 29, wherein the

2   computer-readable program code devices configured to cause a computer to

3   output the accumulator color value comprise computer-readable program code

4   devices configured to cause a computer to output the accumulator value to a

5   frame buffer.

1   33. (Original) The computer program product of claim 29, further com-

2   prising:

3   computer-readable program code devices configured to cause a

4   computer to display the image.

1   34. (Original) The computer program product of claim 29, further com-

2   prising:

3   computer-readable program code devices configured to cause a

4   computer to repeat the initializing, selecting, compositing,

5   storing, determining, and outputting for each image pixel in

6   the defined tile.

1   35. (Original) The computer program product of claim 29, wherein the

2   computer-readable program code devices are configured to cause a computer to

3   perform the initializing, selecting, compositing, storing, and outputting for at

4   least two image pixels concurrently.

1   36. (Original) The computer program product of claim 29, further com-

2   prising:

3   computer-readable program code devices configured to cause a

4   computer to, for a second image pixel in the defined tile and

5   concurrently with the selecting, compositing, storing, and

6   outputting for the first image pixel:

7   initialize a second accumulator color value;

8   select one of the layers in the set of at least two layers, the selected

9   layer having a second layer pixel corresponding to the sec-

10   ond image pixel, the second layer pixel having a color value;

11   composite the color value of the second layer pixel with the second

12   accumulator color value;

13   store the result of the compositing in the second accumulator;

14   determine whether layer pixels for any remaining layers in the set

15   of at least two layers should be processed;

16   responsive to the determination indicating that layer pixels for any

17   remaining layers should be processed, repeat the initializing,

18   selecting, compositing, storing, and determining steps; and

19   output the second accumulator color value.

1   37. (Original) The computer program product of claim 29, wherein at

2 least one of the layers in the set of at least two layers is non-rectangular.

1   38. (Original) The computer program product of claim 29, wherein at

2 least one pixel of at least one of the layers in the set of at least two layers is trans-

3 parent, and wherein the computer-readable program code devices configured to

4 cause a computer to composite the color value of the layer pixel with the accu-

5 mulator color value comprise computer-readable program code devices config-

6 ured to cause a computer to:

7   responsive to the layer pixel being transparent, retain the accumu-

8   lator color value; and

9   responsive to the layer pixel not being transparent, composite the

10   color value of the layer pixel with the accumulator color

11   value.

1   39. (Original) The computer program product of claim 29, further com-

2 prising:

3   computer-readable program code devices configured to cause a

4   computer to define as a second tile an area of overlap be-

5   tween a set of at least two layers, the second tile comprising

6   a second subset of the image pixels; and

7   computer-readable program code devices configured to cause a computer

8 to repeat the initializing an accumulator color value, selecting one of the layers,

9 compositing, storing, repeating, and outputting, for the second defined tile.

1   40. (Original) The computer program product of claim 29, wherein each

2 layer comprises a window, and wherein the image comprises a display for a

3 windowing system.

1   41. (Original) The computer program product of claim 29, wherein a first

2 one of the layers in the set overlaps a second one of the layers in the set, and

3 wherein each layer comprises bounds defined by edges, and wherein at least one

4 edge of the first layer lies within the bounds of the second layer, and wherein the

5 computer-readable program code devices configured to cause a computer to de-

6 fine as a tile an area of overlap comprises:

7   computer-readable program code devices configured to cause a

8   computer to subdivide the second layer along a line corre-

9   sponding to an extension of the at least one edge of the first

10   layer that lies within the bounds of the second layer.

1   42. (Original) The computer program product of claim 29, wherein:

2   the computer-readable program code devices configured to cause a

3   computer to select one of the layers comprise computer-

4   readable program code devices configured to cause a com-

5   puter to select one of the layers in the set of at least two lay-

6   ers, the selected layer having a layer pixel corresponding to

7   the image pixel, the layer pixel having a color value and an

8   alpha value; and

9   the computer-readable program code devices configured to cause a

10   computer to composite the color value of the layer pixel with

11   the accumulator color value are configured to cause a com-

12   puter to use the alpha value to composite the color value.

1   43. (Original) A system for combining at least two overlapping layers to

2 render an image, the image containing a plurality of image pixels, each overlap-

3 ping layer containing a plurality of layer pixels, each layer pixel corresponding to

4 one of the image pixels, the system comprising:

5   tile subdividing means, for defining a tile, the tile comprising a

6   subset of the image pixels delimited according to an area of

7   overlap among a set of at least two layers, so that a first por-

8   tion of the image lies within the tile and a second portion of

9   the image lies outside the tile;

10   accumulating means for initializing an accumulator color value for

11   at least one image pixel in the defined tile;

12   layer selecting means, for successively selecting each of at least a

13   subset of the layers in the set of at least two layers, each se-

14   lected layer having a layer pixel corresponding to the image

15   pixel, the layer pixel having a color value;

16   compositing means, coupled to the layer selecting means and to the

17   accumulating means, for, for each successively selected

18   layer, compositing the color value of the layer pixel with the

19   accumulator color value and storing the result in the accu-

20   mulating means; and

21   output means, coupled to the accumulating means, for outputting

22   the accumulator color value;

23   wherein in combining the overlapping layers, the accumulating

24   means, the layer selecting means, and the compositing

25   means process the first portion of the image distinctly from

26   the second portion of the image.

1   44. (Original) The system of claim 43, wherein each layer pixel has an

2 opacity value, and wherein:

3   the accumulating means further initializes an accumulator opacity

4   value;

5   the compositing means further composites the opacity value of the

6   layer pixel with the accumulator opacity value and stores

7   the result in the accumulating means; and

8   the subset of overlapping layers selected by the layer selecting

9   means is determined responsive to a comparison of the ac-

10   cumulator opacity value with a full opacity value.

1   45. (Original) The system of claim 43, wherein the layer selecting means

2 successively selects layers by selecting a topmost remaining layer in the set of at

3 least two layers.

1   46. (Original) The system of claim 43, wherein the output means outputs

2 the accumulator value to a frame buffer.

1   47. (Original) The system of claim 43, further comprising display means,

2   coupled to the output means, for displaying the image.

1   48. (Original) The system of claim 43, wherein each of the layer selecting

2   means, compositing means, accumulating means, and output means operates on

3   each image pixel in the defined tile.

1   49. (Original) The system of claim 43, wherein each of the layer selecting

2   means, compositing means, accumulating means, and output means operates on

3   at least two image pixels concurrently.

1   50. (Original) The system of claim 43, further comprising a second accu-

2   mulating means, coupled to the compositing means, for initializing a second ac-

3   cumulator color value for a second image pixel in the defined tile, and wherein:

4   the layer selecting means, concurrently with successively selecting

5   each of at least a subset of the layers in the set of at least two

6   layers having a layer pixel corresponding to the first image

7   pixel, selects one of the layers in the set of at least two layers

8   having a second layer pixel corresponding to the second im-

9   age pixel, the second layer pixel having a color value;

10   the compositing means, concurrently with compositing the first

11   color value of the layer pixel with the accumulator color

12   value, composites the color value of the second layer pixel

13   with the second accumulator color value and stores the re-

14   sult in the second accumulating means; and

15   the output means outputs the second accumulator color value.

1   51. (Original) The system of claim 43, wherein at least one of the layers in

2   the set of at least two layers is non-rectangular.

1   52. (Original) The system of claim 43, wherein at least one pixel of at least

2   one of the layers in the set of at least two layers is transparent, and wherein the

3   compositing means:

4   responsive to the layer pixel being transparent, retains the accumu-

5   lator color value; and

6   responsive to the layer pixel not being transparent, composites the

7   color value of the layer pixel with the accumulator color

8   value.

1   53. (Original) The system of claim 43, wherein:

2   the tile subdividing means defines as a second tile a second area of

3   overlap between a second set of at least two layers, the tile

4   comprising a second subset of the image pixels;

5   the accumulating means initializes a second accumulator color

6   value for at least one image pixel in the second defined tile;

7   the layer selecting means successively selects each of at least a sub-

8   set of the layers in the second set of at least two layers, each

9   selected layer having a layer pixel corresponding to the im-

10   age pixel, the layer pixel having a color value;

11   the compositing means, for each successively selected layer, com-

12   posites the color value of the layer pixel with the second ac-

13   cumulator color value and stores the result in the accumula-

14   tor; and

15   the output means outputs the second accumulator color value.

1 54. (Original) The system of claim 43, wherein each layer comprises a

2 window, and wherein the image comprises a display for a windowing system.

1 55. (Original) The system of claim 43, wherein a first one of the layers in

2 . the set overlaps a second one of the layers in the set, and wherein each layer

3 comprises bounds defined by edges, and wherein at least one edge of the first

4   layer lies within the bounds of the second layer, and wherein the tile subdividing

5   means comprises:

6   means for subdividing the second layer along a line corresponding

7   to an extension of the at least one edge of the first layer that

8   lies within the bounds of the second layer.

1   56. (Original) The system of claim 43, wherein:

2   the layer selecting means successively selects each of at least a sub-

3   set of the layers in the set of at least two layers, each selected

4   layer having a layer pixel corresponding to the image pixel,

5   the layer pixel having a color value and an alpha value; and

6   the compositing means composites the color value of the layer pixel

7   with the accumulator color value, using the alpha value.

1   57. (Currently Amended) In an image containing a plurality of layers,

2   wherein a first one of the layers overlaps a second one of the layers, and wherein

3   each layer comprises bounds defined by edges, and wherein at least one edge of

4   the first layer lies within the bounds of the second layer ~~layers~~, a method of sub-

5   dividing tiles, comprising:

6   subdividing the second layer along a straight line corresponding to

7   an extension of the at least one edge of the first layer that lies

8   within the bounds of the second layer, to obtain two tile

9   subdivisions; and

10   storing, in a tile list, a representation of at least a subset of the ob-

11   tained tile subdivisions.

1   58. (Original) The method of claim 57, further comprising:

2   repeating the subdividing step using at least one of the obtained

3   tile subdivisions.

1   59. (Original) The method of claim 57, further comprising:

2   joining at least two adjacent tile subdivisions in the tile list.

1   60. (Original) The method of claim 57, further comprising:

2   responsive to at least two adjacent tile subdivisions including por-

3   tions of the same set of identical layers as one another, join-

4   ing the at least two adjacent tile subdivisions in the tile list.

1   61. (Currently Amended) In a device containing an image having a plu-

2   rality of layers, wherein a first one of the layers overlaps a second one of the lay-

3   ers, and wherein each layer comprises bounds defined by edges, and wherein at

4   least one edge of the first layer lies within the bounds of the second layer layers,

5   a system for subdividing tiles, comprising:

6   a tile subdivider, for subdividing the second layer along a straight

7   line corresponding to an extension of the at least one edge of

8   the first layer that lies within the bounds of the second layer,

9   to obtain two tile subdivisions; and

10   a tile list, coupled to the tile subdivider, for storing a representation

11   of at least a subset of the obtained tile subdivisions.

1   62. (Original) The system of claim 61, wherein:

2   the tile subdivider repeats the subdividing using at least one of the

3   obtained tile subdivisions.

1   63. (Original) The system of claim 61, further comprising:

2   a tile joiner, coupled to the tile list, for joining at least two adjacent

3   tile subdivisions in the tile list.

1   64. (Original) The system of claim 61, further comprising:

2   a tile joiner, coupled to the tile list, for, responsive to at least two

3   adjacent tile subdivisions including portions of the same set

4   of identical layers as one another, joining the at least two ad-

5   jacent tile subdivisions in the tile list.

1   65. (Currently Amended) A computer program product comprising a

2   computer-usable medium having computer-readable code embodied therein for

3   subdividing tiles, in an image containing a plurality of layers, wherein a first one

4   · of the layers overlaps a second one of the layers, and wherein each layer com-

5   prises bounds defined by edges, and wherein at least one edge of the first layer

6   lies within the bounds of the second layer layers, subdividing tiles, comprising:

7   computer-readable program code devices configured to cause a

8   computer to subdivide the second layer along a straight line

9   corresponding to an extension of the at least one edge of the

10   first layer that lies within the bounds of the second layer, to

11   obtain two tile subdivisions; and

12   computer-readable program code devices configured to cause a

13   computer to store, in a tile list, a representation of at least a

14   subset of the obtained tile subdivisions.

1   66. (Original) The computer program product of claim 65, further com-

2   prising:

3   computer-readable program code devices configured to cause a

4   computer to repeat the subdividing using at least one of the

5   obtained tile subdivisions.

1   67. (Original) The computer program product of claim 65, further com-

2 prising:

3   computer-readable program code devices configured to cause a

4   computer to join at least two adjacent tile subdivisions in the

5   tile list.

1   68. (Original) The computer program product of claim 65, further com-

2 prising:

3   computer-readable program code devices configured to cause a

4   computer to, responsive to at least two adjacent tile subdivi-

5   sions including portions of the same set of identical layers as

6   one another, join the at least two adjacent tile subdivisions in

7   the tile list.

1   69. (Currently Amended) In a device containing an image having a plu-

2 rality of layers, wherein a first one of the layers overlaps a second one of the lay-

3 ers, and wherein each layer comprises bounds defined by edges, and wherein at

4 least one edge of the first layer lies within the bounds of the second layer ~~layers~~,

5 a system for subdividing tiles, comprising:

6   tile subdividing means, for subdividing the second layer along a

7   straight line corresponding to an extension of the at least one

8   edge of the first layer that lies within the bounds of the sec-

9   ond layer, to obtain two tile subdivisions; and

10   tile list storage means, coupled to the tile subdividing means, for

11   storing a representation of at least a subset of the obtained

12   tile subdivisions.

1   70. (Original) The system of claim 69, wherein:

2   the tile subdividing means repeats the subdividing using at least

3   one of the obtained tile subdivisions.

1   71. (Original) The system of claim 69, further comprising:

2   tile joining means, coupled to the tile list storage means, for joining

3   at least two adjacent tile subdivisions in the tile list.

1   72. (Original) The system of claim 69, further comprising:

2   tile joining means, coupled to the tile list storage means, for, responsive

3   to at least two adjacent tile subdivisions including portions of

4   the same set of identical layers as one another, joining the at least

5   two adjacent tile subdivisions in the tile list.